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ABSTRACT

A study explored characteristics, backgrounds, and social contextual influences which affect the movement of female students into teacher education programs during college. Using a nationally representative longitudinal sample of college students during the period 1972 through 1976, patterns of movement to and from education were described, and causal models were examined which compare the effects of several variables on differentiating education majors from those in other fields, those in similar, traditionally female fields, and those in dissimilar, traditionally male-dominated fields. Variables included ability, social class background, academic performance, residential background, self-concept, and college selectivity. Results indicated important patterns of influences during these early years of occupational staging which correspond closely with the characteristics of relatively open access, compatibility with traditional female roles, middle class status, and limited intrinsic and extrinsic rewards which are associated with the teaching occupation. (Author/JM)

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RECRUITMENT TO TEACHING DURING COLLEGE:

RESULTS FROM THE NLS

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Questions related to the characteristics, talents, backgrounds, and motivations of college students who choose careers in elementary and secondary teaching are of increasing interest to educators and to society in general. Greater understanding of this period of initial career staging for selection and recruitment into the teaching occupation is needed, especially in light of several recent trends.

First, there is concern that the academic ability of beginning teachers is declining (Vance & Schlechty, 1982). Information about the ways ability, in conjunction with other factors, influences student decisions to enter teaching will contribute to our understanding of these declines. Second, concomitant with decreases in occupational positions relative to supply during the past decade (NCES, 1978), there is increasing pressure to limit the numbers of students entering and graduating from teacher education programs. Although some have also suggested increases in teacher demand later in this decade, the continued vulnerability to criticism of the public educational system, as well as concerns with professional prestige, add to educators' and administrators' interest in this area to inform their decisions about recruitment policies and practices.

Several sociological studies offer evidence of the characteristics of students interested in pursuing the career of schoolteacher. The field tends to attract those with lower ability, limited academic achievement, and lower social status backgrounds (Davis, 1965; Lortie, 1975; Schwarzweller & Lyson, 1978). High proportions tend to have

rural origins (Davis, 1965; Pavalko, 1965). Furthermore, disproportionate numbers tend to be female and tend to be enrolled in less selective colleges and universities (Astin, 1977; Astin & Panos, 1969; Sharp & Hirshfeld, 1975).

However, much of the literature in this area is based on descriptive and bivariate analyses of less than recent cross-sectional data. Studies using multivariate methods often rely on weak or nonexistent theoretical frameworks, and few studies rely on samples from national populations. This study adds to this body of literature and employs recent national longitudinal data on students and their institutions. The multivariate models for causal analysis which are used allow assessment of interrelationships among several variables which impinge on student choices. Also, the social psychological variable of self-concept, rarely examined in this literature, is introduced as an additional potential explanatory factor.

This study explores the characteristics, backgrounds, and social contextual influences which affect the movement of undergraduate students into the field of education. The study is organized in three parts. First, we describe the patterns of movement to and from teacher education programs between the freshman and senior years in college. Second, we develop a causal model of choice of the field and analyze the effects of several factors on majoring in education, relative to all other fields of study. Third, we analyze the effects of these factors in causal models comparing education majors to those who choose similar, so-called traditionally female fields, and dissimilar, traditionally male fields. By taking this approach, we seek insight into

patterns of movement into and out of the occupation, the direct and indirect effects and the relative contributions of several factors previously only examined in bi-variate analyses, and comparative information on education and similar and dissimilar fields.

A Model of Influences on Choosing Education

Figure 1 presents a conceptual and analytical model of the individual and social contextual factors examined in this study which potentially influence students' decisions to enter teacher training programs during college. The model is supported by theory in the areas of career choice, socialization, and occupational sociology. The career choice process may be viewed as being motivated by the value individuals place on their perceived alternatives and their perceived chances of realizing each (Blau et al., 1956). This view suggests that individuals explore their alternatives and gradually commit themselves to a field as they compromise their initial preferences in light of their perceptions of accessibility and possibilities for success (Ginzberg, et al., 1951; Rosenberg, 1957). Recognizing that preferences and choices are influenced by the values, beliefs, and prescriptions for behavior which are emphasized in the social groups in which persons interact (Mead, 1934), we expect social contexts to have important consequences in this process. Furthermore, the unique nature and structure of the teaching occupation among the professions is likely to account in certain important ways for the characteristics and

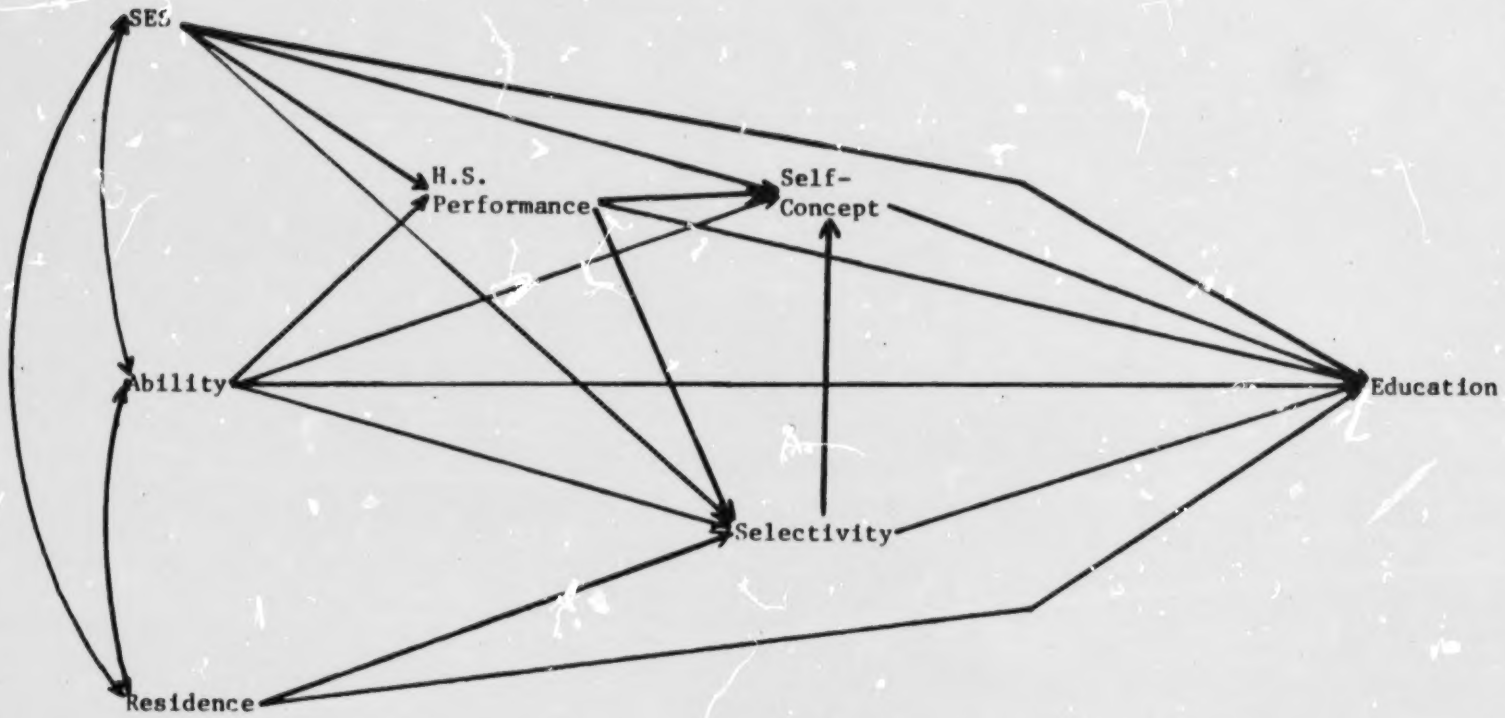

Figure 1. Full choice of education model. (The dependent dichotomy, education, was operationalized in successive parts of the study as: a) non-education majors/education majors; b) majors in traditionally male-dominated fields/education majors; c) majors in traditionally female-dominated fields/education majors.)

motivations of its recruits (Lortie, 1975).

The model includes the individual variables of academic ability, academic performance, and self-concept, as well as the social contextual variables of socioeconomic status (SES), place of residence (rural-urban), and selectivity of college attended. While several other factors may be operating in this process, including gender, race, and significant others, limitations in the data necessitated their exclusion, and the study is limited to white females. The predominance of white females in teaching lends support to their sole inclusion. Yet the compatibility of the teacher role with traditional female norms, and the strong patterns of socialization into such roles (Horner, 1972; Meyer, 1970) are likely to cast a powerful halo over other considerations in the choice process. Components of this model will now be discussed.

Academic ability and performance. It is well documented that, unlike other professions, education is accessible and has minimal criteria for admission (Brubaker, 1976; Carpenter, 1973; Lortie, 1975). This fact, along with evidence that less able and poorer performing students have limited knowledge of occupational possibilities (DeFleur & Menske, 1975), and for whom the occupation of teaching is quite visible, suggests that less able and poorer performing students will be more likely to choose education as a field of study.

SES. Despite the limited rewards available in teaching it "is clearly white-collar, middle class work" (Lortie, 1975, p. 35). For lower class youth, teachers often provide obvious models on which mobility aspirations are based (Brookover, 1953). Education is likely to be perceived as an attainable career option for mobility seeking lower class youth. Hence it is expected that greater portions of lower SES

students will choose education.

Residence. For rural youth, who are exposed to fewer occupational role models than their urban counterparts (Lipset, 1955), teaching retains high visibility and perhaps higher relative status than other occupations. This evidence, plus the generally local, as opposed to cosmopolitan, nature of teachers and the often similar nature of rural residents, suggests that those from rural backgrounds may be more likely to choose a career in teaching.

Self-concept. Viewing occupational choice as implementation of the self-concept, evidence suggests that those with low self-concepts are less likely to choose fields consonant with their real talents and interests and are more susceptible to outside influences (Korman, 1966, 1967). Females with lower self-concepts therefore are expected to be more likely to accept the prevailing norms and choose teaching rather than fields requiring greater talents and challenges to traditional role conceptions.

Selectivity. Given the higher achievement aspirations of students in more selective schools (Thistlethwaite & Wheeler, 1966), the valuation of career options available at more selective colleges are likely to be higher for fields offering great intrinsic and extrinsic rewards than for education. These factors should reduce the likelihood that those in more selective colleges would enter teaching training programs. Further, in less selective colleges, opportunities for pursuing non-traditional fields, such as sciences and engineering among females, would be fewer than in more selective schools where the range of opportunity is wider. The net result of this may be that females in the more selective context, possibly originally disposed to teaching

nearly by default, are less likely to choose education, given the shared perceptions of possible success in other fields. In less selective schools such perceptions would be less likely to arise.

In addition to these considerations, ability, academic performance, and SES have been shown to be associated with the selectivity of the college one chooses to attend, and students from rural areas are more likely to attend nearer, less selective colleges (Davis, 1965; Nolfi, et al., 1978). Hence, we would expect selectivity to act as an important mediator of the effects of these factors on the choice of education as a field of study. Furthermore, through the socialization and labelling process in schools (Brophy & Good, 1970; Rist, 1970), successful students tend to be viewed as socially and academically acceptable. These labels provide the basis of evaluation of self and others, enhancing the self-concept of those who succeed in school, while reducing it for those who deviate from the norm. On this basis, we expect positive effects of ability, performance, SES, and selectivity on self-concept.

Methodology

Data

The National Longitudinal Study of the High School Class of 1972 (NLS) is the data base for this study. Approximately 20,000 high school seniors in more than 1300 high schools were selected to represent the national population using a complex, two stage probability sample. Response rates approach 100 percent, and sample retention rates exceed 90 percent. A base year survey conducted in spring, 1972 and four followup surveys conducted in fall, 1973, 1974, 1976, and 1979

comprise the data base. The data base was selected because it is representative of the national population of traditional age college students during the early and mid 1970s.

Sample

The sample includes NLS respondents who began two- or four-year colleges in fall 1972 following the senior year in high school in 1972, who did not stop out or drop out but remained enrolled through October 1975 (and October 1976 if they continued enrollment in pursuit of a baccalaureate degree), and who had no missing data on variables in the analysis (cf. Measurement of Variables). Separate analyses of respondents omitted due to missing data suggest that their exclusion does not bias the sample. Due to their small numbers and attendant problems created for statistical analysis, non-whites and males were excluded. The sample includes 848 white females selected as outlined here.

Measurement of Variables

Three composite variables, ability, SES, and self-concept were created for the sample using factor analytic scaling techniques.[1] The operationalization of these and other variables is discussed below.

Ability: a composite for general aptitude based on six ETS developed cognitive tests administered with the NLS base year questionnaire, Spring 1972. Scores for this sample were weighted and summed, using factor score coefficients based on principal components analysis.

Self-Concept: a composite for general self-esteem based on

[1] Group means were substituted for missing values among the items comprising the self-concept and SES composites, except in cases for which more than half the items had missing values. With the latter, the respondent was excluded from the sample. This procedure tends to yield somewhat conservative estimates.

responses to four items from the first followup questionnaire, Fall 1973. Responses for this sample were weighted and summed, using factor score coefficients based on principal components analysis with varimax rotation.

SES: an equally weighted composite for socioeconomic status based on values for this sample on father's education, mother's education, father's occupation, family income, and a household items index.

Residence: an eight value variable indicating the size of the community respondent lived in during the base year, ranging from 1) rural or farming community to 8) very large city (over 500,000 people).

H.S. Performance: percentile rank in high school class.

Selectivity: a measure of the ability level of each college's entering students, based on a merger of Astin's selectivity values (1971) with the NLS data.

Fields of study are grouped according to students' stated actual or intended fields of study.

Analysis

For the first part of the analysis, respondents were divided into four groups labelled persisters, recruits, defectors, and never in education, defined as follows: a) persisters include respondents who indicated education as their actual or intended field of study as freshmen and as seniors; b) recruits include those who indicated education as seniors but not as freshmen; c) defectors include those who indicated education as freshmen but not as seniors; and d) never in education includes those indicating other fields of study as freshmen and seniors. Comparisons are made between these groups and freshmen and seniors in education using the summary measures of association

gamma and Kendall's tau_b. For the second and third parts of the analysis, multiple regression and path analysis are the primary modes of analysis. The use of regression on the dependent dichotomy,[1] education versus other fields of study, is conceptually a discriminate analysis, in which multiple regression is used to predict group membership, the student's field of study in college. The technique is useful in assessing the relative effects of each of the variables controlling for other variables in the model.

Results

Part One: Freshmen, Persisters, Recruits, Defectors, and Seniors

Table 1 shows the associations of the characteristics and contexts of interest for female freshmen and seniors with choosing the field of education, as well as the associations of these factors with movement into and out of the field. (Note that education is coded 1 and never in education 0.) Considering the initial pool of freshmen, we see that females choosing education tend to be of lower ability and lower levels of high school performance than females in other fields. They also tend to be from more modest social origins and from more rural areas. Additionally, those in less selective colleges and those with lower self-concepts tend to choose education.

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[1] Evidence suggests that the use of dichotomous dependent variables in regression analysis yields comparable results as such methods as log-linear analysis when the dependent dichotomy is within the range of .25 to .75 (Knoke, 1975). This is the case for all subsequent analyses, with the exception of comparisons of female education majors with females in the hard sciences, math, and engineering fields. Some caution is due in interpreting the results for that model.

Table 1

Females' Choice of Education vs. Other Fields by Ability, SES, Self-Concept, Residence, H.S. Performance, and Selectivity of College 1972 for Freshmen, Persisters in Education, Recruits to Education, Defectors from Education and Seniors[a] (N = 848)

	Ability	SES	Self-Concept	Residence	Performance	Selectivity
Freshmen						
Kendall's Tau_b	-.172**	-.140**	-.063	-.118**	-.139**	-.144**
Gamma	-.315	-.259	-.118	-.210	-.258	-.260
Persisters						
Kendall's Tau_b	-.169**	-.119**	-.072*	-.113**	-.131**	-.149**
Gamma	-.301	-.244	-.150	-.221	-.265	-.296
Defectors						
Kendall's Tau_b	-.033	-.057*	-.006	-.027	-.037	-.016
Gamma	-.116	-.196	.020	-.092	-.128	-.051
Recruits						
Kendall's Tau_b	-.058*	-.033	.000	.000	-.051	-.051*
Gamma	-.145	-.083	.000	.000	-.128	-.122
Seniors						
Kendall's Tau_b	-.185**	-.126**	-.062*	-.097**	-.147**	-.163**
Gamma	-.319	-.219	-.109	-.161	-.257	-.275

* $p < .05$; ** $p < .005$; [a]Tests of significance were not performed for Gamma.
(Freshmen in education N = 219, Persisters in Education N = 168, Defectors from education N = 51, Recruits to education N = 102, Seniors in education N = 270.)

Persisters tend to have slightly lower self-concepts and tend to be in less selective colleges than the full freshman group in education. They also tend to be of slightly higher SES backgrounds and ability, and from more urban backgrounds than these freshmen. These differences are due in part to the loss of students to other fields.

Those who leave the field, the defectors, tend to be of more modest social backgrounds than females in other fields, but they are of higher ability, have better high school records, and are enrolled in more selective colleges than persisters. They also tend to be from more urban origins and tend to have higher self-concepts than those who remain in the field.

Recruits tend to be of lower ability and in less selective colleges than females in other fields, yet they are of higher ability with better records of performance, higher SES backgrounds, and higher self-concepts than persisters. They also tend to be from more urban backgrounds and in more selective colleges than persisters.

The net result of this movement to and from other fields is that seniors in education tend to be of lower ability and lower SES than other seniors, and they tend to be in less selective colleges, with poorer records of performance, and lower self-concepts than those in other fields. These results also show that there are only small differences on these factors between the initial freshman group in education and those in the field by their senior year.

Tables 2 and 3 show the fields from which students come, and the fields they choose upon leaving education. The greatest portion of recruits, 30.4%, come from the fields comprising the humanities and fine arts. Though they are a smaller group, the greatest portion of those

Table 2

Female Recruits to Education

Percentage Distribution of Previous Field of Study

Field of Study	Relative Frequency (%) (N= 102)
Biological Sciences	11.8
Humanities and Fine Arts	30.4
Social Sciences	19.6
Undecided	10.8

Note: Only those fields (including "undecided"), initially chosen by more than 10 percent of recruits are shown.

Table 3

Female Defectors From Education

Percentage Distribution of Subsequent Field of Study

Field of Study	Relative Frequency (%) (N= 51)
Business	17.6
Humanities and Fine Arts	19.6
Health Services	11.8
Social Sciences	25.5

Note: Only those fields chosen by more than 10 percent of defectors are shown.

leaving the field, 25.5%, tend to choose the social sciences. Substantial portions also enroll in the humanities and fine arts, business, and health services.

Part Two: Causal Analysis--
Education vs. Other Fields

Table 4 and figure 2 show the regression coefficients for the model, and direct and indirect effects are summarized in table 5. The model predicts only 7.1% of the variance in the choice of education versus other fields. This suggests that additional, unspecified variables are operating in the choice process, and that perhaps these factors taken together do not discriminate well because the differences on these variables are not of great magnitude.

However, regression weights indicate that all relationships are in the expected direction. Furthermore, self-concept has no significant direct effect on choosing education, which indicates that, independent of other factors, females of lower self-concept are not more likely to choose education, despite the negative zero order correlation.

Independent of other factors, the characteristics and contexts having the strongest direct and negative effects on choosing education are one's ability, class background, and the selectivity of the college one attends. Being from a rural background and having a poorer high school record also are direct influences. It is through college selectivity that the indirect effects of ability, SES, and residence on choosing education operate, though both SES and ability also have negative indirect effects via performance. Lower ability, lower SES, and more rural females are more likely to attend less selective colleges, and within that context, to choose education as a field of study.

Table 4

Standardized and Unstandardized Regression Coefficients[a] for the Choice of Education Model for Female Seniors

(N= 848)

Dependent Variables	Independent Variables						R^2
	SES	Ability	Performance	Residence	Selectivity	Self Concept	
Performance	-.097* (-2.65)*	.571* (.120)*					.321
Selectivity	.183* (.423)*	.272* (.005)*	.095* (.008)*	.106* (.067)*			.180
Self-Concept	.077* (1.181)*	.008 (.001)	.016 (.009)		.055* (.370)*		.012
Education	-.079* (-.057)*	-.108* (-.0006)*	-.067* (-.002)*	-.067* (-.013)*	-.105* (-.032)*	-.023 (-.001)	.071

* $p < .05$

[a] Unstandardized coefficients are presented in parentheses below the standardized coefficient for each relationship.

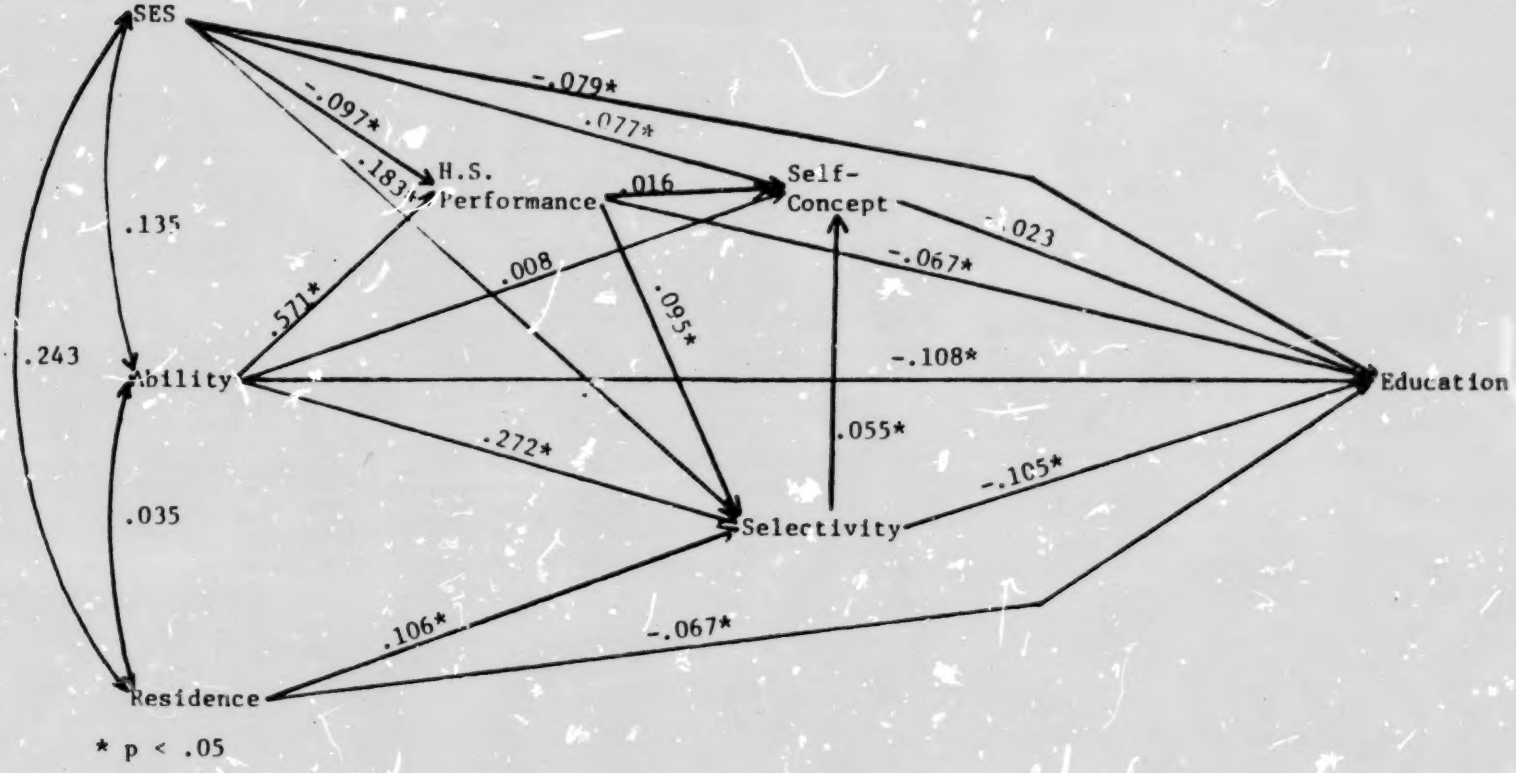

Figure 2. Path model of the choice of education process for female seniors. (All statistics, except the correlations between the exogenous variables, are standardized regression coefficients (beta weights). The coefficients between SES, ability, and residence are zero order correlations. N = 848.)

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Table 5

Summary of Social Class, Ability, High School Performance, Residence, Selectivity, and Self-Concept Effects in the Choice of Education Process for Female Seniors[a]

	SES	Ability	Performance	Residence	Selectivity	Self-Concept
Indirect Effects:						
Via Performance	.007	-.038	---	---	---	---
Via Performance and Self-Concept	N.S.	N.S.	---	---	---	---
Via Selectivity	-.019	-.029	-.010	-.011	---	---
Via Selectivity and Self-Concept	N.S.	N.S.	N.S.	N.S.	---	---
Via Performance and Selectivity	.001	-.006	---	---	---	---
Via Performance, Selectivity and Self-Concept	N.S.	N.S.	---	---	---	---
Via Self-Concept	N.S.	N.S.	N.S.	---	N.S.	---
Total Indirect Effects	-.011	-.073	-.010	-.011	N.S.	---
Direct Effects	-.079	-.108	-.067	-.067	-.105	N.S.
Total Effects	-.090	-.181	-.077	-.078	-.105	N.S.

[a]All statistics are based on the beta weights shown in Table 4 and Figure 2.
N.S. = not significant at the .05 level.

Further, higher SES females tend to get slightly poorer grades, as do also less able females, and major in education.

Part Three: Causal Analyses--
Education vs. Similar
and Dissimilar Fields

Going beyond comparisons of education majors with those in all other fields taken together, in this section we explore the effects of these variables on the choice of education relative to the dissimilar fields of mathematics, sciences, and engineering, as well as the similar fields of home economics, health, and public services.

Table 6 and figure 3 show the regression coefficients for the model, comparing females in education to females in the less traditional math, science, and engineering fields. Note that R^2 is .172, as compared to .071 for the earlier model (cf. table 4). The model clearly discriminates better between education majors and those in traditionally male fields.

Independent of other factors, self-concept and residence do not influence females' choices of education versus these fields, but there is some tendency for rural females to attend less selective colleges, and in that context, major in education. Those from more modest social origins tend to choose education. The indirect effects of SES through performance and selectivity indicate that insofar as higher SES females tend also to go to less selective colleges due to their poorer high school records, they are more likely to choose education than the non-traditional fields. These effects are offset in part by the stronger tendency for higher SES females to attend more selective colleges independent of high school performance, and in that context

Table 6

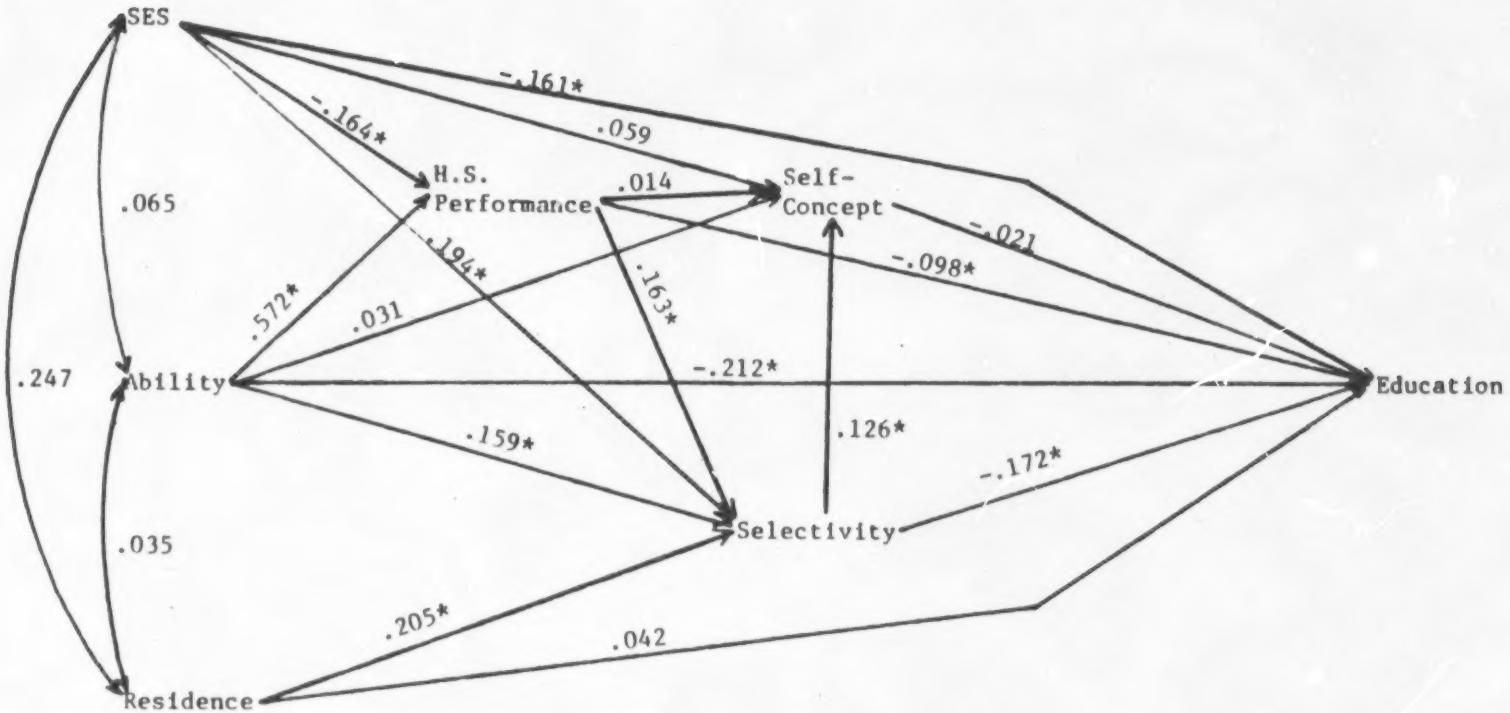
Standardized and Unstandardized Regression Coefficients[a] for the Choice of Education Model for Female Seniors; Sciences, Mathematics, and Engineering Majors vs. Education Majors.

(N= 302)

Dependent Variables	Independent Variables						R^2
	SES	Ability	Performance	Residence	Selectivity	Self Concept	
Performance	-.164* (-4.700)*	.572* (.121)*					.342
Selectivity	.194* (.421)*	.159* (.003)*	.163* (.012)*	.205* (.123)*			.174
Self-Concept	.059 (.838)	.031 (.003)	.014 (.007)		.126* (.824)*		.027
Education	-.161* (-.076)*	-.212* (-.0007)*	-.098* (-.002)*	.042 (.006)	-.172* (-.038)*	-.021 (-.0007)	.172

* $p < .05$

[a] Unstandardized coefficients are presented in parentheses below the standardized coefficient for each relationship.



* p < .05.

Figure 3. Path model of the choice of education process for female seniors; sciences, mathematics, and engineering majors vs. education majors. (All statistics, except the correlations between the exogenous variables, are standardized regression coefficients (beta weights). The coefficients between SES, ability, and residence are zero order correlations. N = 302.)

choose non-traditional fields (see table 7).

Similarly, the direct negative effect of ability indicates that less able females tend to choose education, as do females in less selective colleges and those with poorer high school records. The negative effects of ability are also evident as less able females tend to have poorer records, and tend to attend less selective colleges.

Table 8 and figure 4 show the regression coefficients for the model, comparing females in education to those in the similar, traditionally female fields of home economics, health, and public services. Note that $R^2 = .019$, indicating that this model differentiates little among education majors and those in similar fields of study. It is also clear that there are no direct or indirect effects of any of the variables in the model (Table 9), which shows that female education majors are not different from those in these similar fields in terms of ability, social and residential backgrounds, self-concept, high school performance, and selectivity of college attended.

Discussion

Results from this sample of the National Longitudinal Study suggest that several individual characteristics and social contexts have important influences on females' decisions to enter and continue in teacher education programs during college. The expected effects of the factors investigated in this study, selected through a review of research, were generally supported. The patterns of movement into and out of the field, and the patterns of direct and indirect effects of these factors on students' choices, show clear differences between those in education and those in other fields and provide preliminary informa-

Table 7

Summary of Social Class, Ability, High School Performance, Residence, Selectivity, and Self-Concept Effects in the Choice of Education Process for Female Seniors; Sciences, Mathematics, and Engineering Majors vs. Education Majors[a]

	SES	Ability	Performance	Residence	Selectivity	Self-Concept
Indirect Effects:						
Via Performance	.016	-.056	---	---	---	---
Via Performance and Self-Concept	N.S.	N.S.	---	---	---	---
Via Selectivity	-.033	-.027	-.028	-.035	---	---
Via Selectivity and Self-Concept	N.S.	N.S.	N.S.	N.S.	---	---
Via Performance and Selectivity	.005	-.016	---	---	---	---
Via Performance, Selectivity and Self-Concept	N.S.	N.S.	---	---	---	---
Via Self-Concept	N.S.	N.S.	N.S.	---	N.S.	---
Total Indirect Effects	-.012	-.099	-.028	-.035	N.S.	---
Direct Effects	-.161	-.212	-.098	N.S.	-.172	N.S.
Total Effects	-.173	-.311	-.126	-.035	-.172	N.S.

[a] All statistics are based on the beta weights shown in Table 6 and Figure 3. N.S. = not significant at the .05 level.

Table 8

Standardized and Unstandardized Regression Coefficients[a] for the Choice of Education Model for Female Seniors; Home Economics and Agriculture, Health and Public Service Fields vs. Education

(N= 421)

Dependent Variables	Independent Variables						R^2
	SES	Ability	Performance	Residence	Selectivity	Self Concept	
Performance	-.121* (-3.445)*	.521* (.115)*					.286
Selectivity	.123* (.260)*	.218* (.004)*	.115 * (.009) *	.148* (.088)*			.123
Self-Concept	.077* (1.195)*	-.023 (-.003)	.030 (.016)		.113* (.826)*		.021
Education	-.053 (-.040)	-.030 (-.0002)	-.059 (-.002)	-.015 (-.003)	-.066 (-.023)	-.027 (-.001)	.019

* $p < .05$

[a] Unstandardized coefficients are presented in parentheses below the standardized coefficient for each relationship.

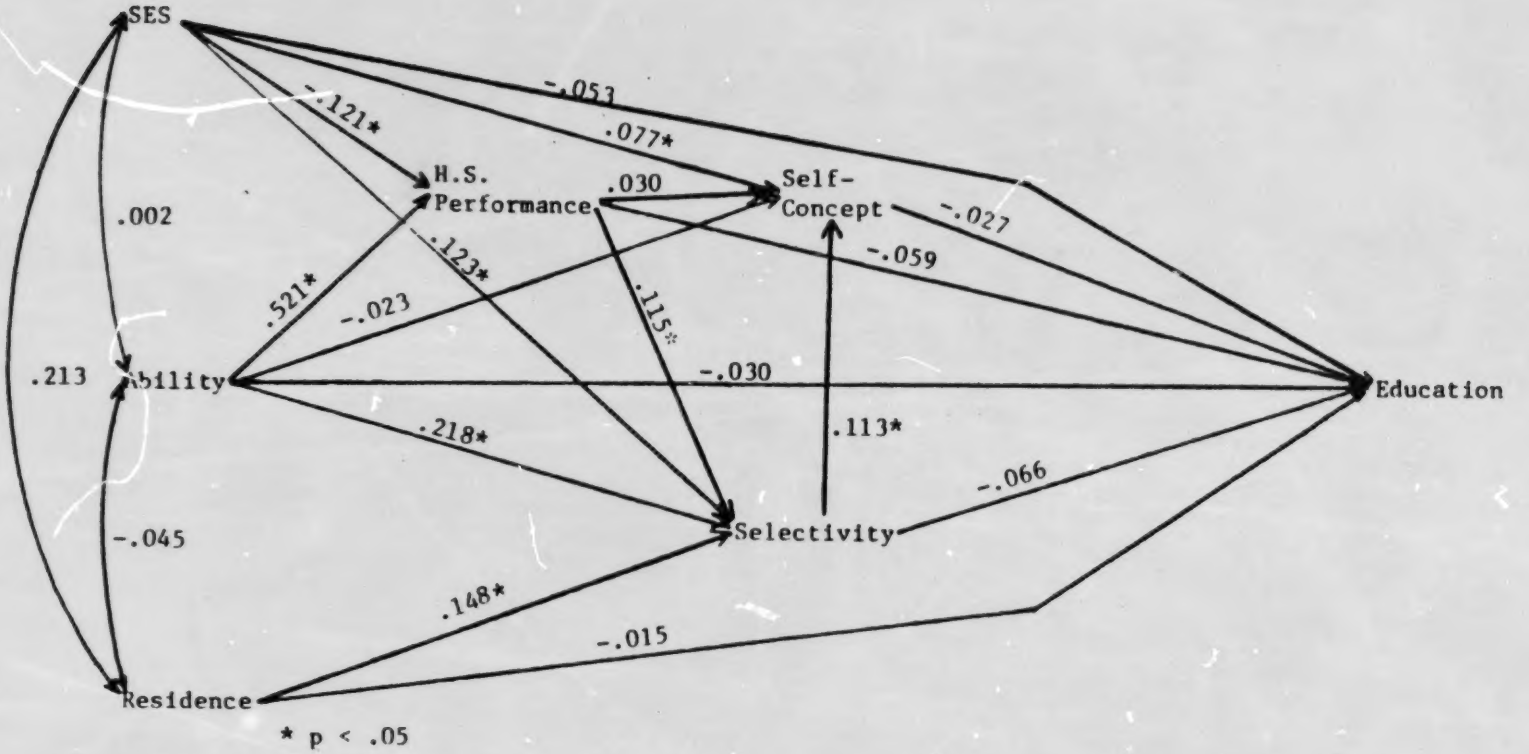


Figure 4. Path model of the choice of education process for female seniors; home economics and agriculture, health and public service fields majors vs. education majors. (All statistics, except the correlations between the exogenous variables, are standardized regression coefficients (beta weights). The coefficients between SES, ability, and residence are zero order correlations. N = 421.)

Table 9

Summary of Social Class, Ability, High School Performance, Residence, Selectivity, and Self-Concept Effects in the Choice of Education Process for Female Seniors; Home Economics and Agriculture, Health and Public Service Fields Majors vs. Education Majors

	SES	Ability	Performance	Residence	Selectivity	Self-Concept
Indirect Effects:						
Via Performance	N.S.	N.S.	---	---	---	---
Via Performance and Self-Concept	N.S.	N.S.	---	---	---	---
Via Selectivity	N.S.	N.S.	N.S.	N.S.	---	---
Via Selectivity and Self-Concept	N.S.	N.S.	N.S.	N.S.	---	---
Via Performance	N.S.	N.S.	---	---	---	---
Via Performance, Selectivity and Self-Concept	N.S.	N.S.	---	---	---	---
Via Self-Concept	N.S.	N.S.	N.S.	---	N.S.	---
Total Indirect Effects	N.S.	N.S.	N.S.	N.S.	N.S.	---
Direct Effects	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.
Total Effects	N.S.	N.S.	N.S.	N.S.	N.S.	N.S.

[a] All statistics are based on the beta weights shown in Table 8 and Figure 4. N.S. = not significant at the .05 level.

tion on the ultimate shape of the teaching occupation.

Descriptive analyses indicate that relative to females in other fields, freshmen in education tend to be of lower ability, SES, and self-concept, with poorer high school records of performance, and in less selective colleges. Nearly one-fourth of these leave education for the fields of social sciences, humanities, business, and health services. These tend to be brighter students, in more selective colleges, who view their own worth quite positively, relative to other students. It is likely that as these aspirations increase within the context of the more selective colleges, and as they overcome their initially lower aspirations resultant from their more modest social backgrounds, they tend to seek other fields with greater intrinsic and extrinsic rewards.

Recruits to education comprise nearly 40 percent of the seniors. They come from the humanities and the social and biological sciences, and they tend to be of lower ability and in less selective colleges than those in other fields. They may have either experienced difficult challenges elsewhere, or switched to education in an effort to use the knowledge gained in those areas. However, they represent a positive influx insofar as they are more able than those persisting in the field from the freshman to the senior year.

These gains and losses suggest that although more able and higher self-concept females are guided out of education into other fields during college, the relatively easy access to education, its "path of least resistance" compatibility with traditional roles, and the perceptions of great value and chances for success in less selective colleges tend also to attract females to the field.

Causal analyses of the independent effects of these factors generally confirmed our expectations. First, being of lower ability and in less selective colleges are the strongest predictors of majoring in education, and the tendencies for less able, weaker students to attend less selective colleges and in that context, major in education, adds to their influence. However, self-concept has no independent effect on choosing education; given females of equal ability and performance, residence and social class background in comparable academic contexts, those with higher or lower feelings of self worth do not disproportionately choose the field.

Females from more modest social backgrounds also choose the field, suggesting that teaching is a route for pursuing mobility aspirations. Yet middle and upper class females also choose education, in part due to their poorer academic performances. This suggests that education may act as a social status "floor" for many females unable to do well academically in other fields, and it suggests partial explanation for limited commitment to the field.

Furthermore, the independent effects of residence indicate that students with rural backgrounds are more likely to major in education, supporting the assertions that limited perceptions of achievable occupational role models among rural youth, the high visibility of teachers among those models, and the local rather than cosmopolitan nature of the field, tend to hold true. These effects appear to be reinforced in the milieux of the less selective college, where rural students are more likely to be enrolled.

Contrasts of female education majors to those in the sciences, mathematics, and engineering elucidate these comparisons. As expected,

less able females, with poorer high school records, in less selective colleges tend to choose education rather than these fields which are incompatible with traditional female roles, are more academically demanding, and pose higher academic restrictions for access. Lower SES females also tend to choose education, independent of other factors, suggesting the diminution of mobility aspirations and perceived alternatives for success among this group, perhaps due in part to the overriding influence of traditional norms. Again there is a moderate tendency for middle class females to choose education, as they tend to be poorer students and attend less selective schools. Although the reasons are unclear, residence does not differentiate these groups of students. Also, the impact of the less selective colleges is again seen, as the tendency of rural females to attend less selective schools also enhances their likelihood of majoring in education.

It is not surprising that comparisons between education majors and those in the fields of home economics, health, and public service, show no differences. These fields are similar in terms of access and ease of entry, available intrinsic and extrinsic rewards, perceived probabilities for success, and compatibility with traditional female roles.

The findings of this study should be of interest to educators and policymakers concerned about the nature and quality of the pool of prospective teachers after college. Diversity among this pool is a valued goal, and the lack of powerful discrimination between education majors and others suggests that this goal is being partially met. Yet we must also seek talented and effective teachers.

The persistent, systematic patterns of less able, poorer performing students remaining in the field as seniors is disturbing. Although causal relationships between ability and teaching effectiveness are by no means certain, evidence of positive associations of teacher ability with student achievement (Coleman et al., 1966) and with ratings of teacher quality (Cornett, 1969; Eash & Rasher, 1977) suggest at the least that teachers' intellectual qualities are important in the teaching-learning context.

Furthermore, some of the factors which result in patterns of movement to and from the field in these early stages during college may have important consequences for teacher recruitment and retention. For example, there is evidence of similar patterns of movement out of teaching positions by more able teachers (Schlechty and Vance, 1981), and by middle and upper class teachers recruited in recent years (Bloland and Selby, 1980; Dworkin, 1980). These patterns are not dissimilar to those investigated here, and suggest that early perceptions of the field correlate well with occupational realities.

Additional research is needed to more fully delineate these processes of recruitment and retention. Future researchers should focus closely on behaviors and experiences during college. For example, comparisons of grades, adjusted for college selectivity, at points prior to movement to and from the field of education would provide more information about why students change fields of study as would also direct statements from students. Questions concerning causal direction also deserve attention. For example, do students already interested in becoming teachers tend to enroll at less selective colleges? Also, we need to know more about the specific factors that are clearly operating

in the college environment which affect students' choice behaviors. Additionally, the influences of race, gender, traditional and non-traditional sex role orientations, significant others, and personal and vocational value orientations, all of which are likely to bear upon decisions to enter and continue in education, need further examination. In doing so, we may be able to further identify patterns of influence on decisions to enter and continue in the field, from the pre-college periods when many such decisions are made, on through the entry into teaching positions and retention in those positions in the early and later years.

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